

## ABSTRACT

### **DATA STORAGE APPARATUS AND METHOD FOR MANAGING BUFFER MEMORY**

[0063] To avoid degradation of performance of a storage apparatus even when access biased to writing or reading of data is performed in a buffer memory that adopts a dual ring buffer system as a data structure. A sector buffer for caching an access request is provided in a DRAM of the storage apparatus. The sector buffer has a first ring buffer (BUF\_W) that temporarily holds an external write request for a recording medium in advance of its process to the recording medium, and a second ring buffer (BUF\_R) that retains data read from the recording medium according to an external read request for the recording medium. An MPU of the storage apparatus shifts a BPAGE of the BUF\_R or BUF\_W according to external access patterns to the recording medium to thereby change the buffer sizes of the BUF\_R and BUF\_W.